

Flood stages during May, 1923—Continued.

River and station.	Flood stage.	Above flood stages—dates.		Crest.	
		From—	To—	Stage.	Date.
MISSISSIPPI DRAINAGE—continued.					
Atchafalaya:	<i>Fect.</i>			<i>Fect.</i>	
Melville, La.....	37	(1)	1	37.0	1
North Platte:					
North Platte, Nebr.....	5	29	29	5.0	29
Solomon:					
Beloit, Kans.....	18	24	27	28.8	25
Trinity:					
Dallas, Tex.....	25	(1)	5	31.0	3
Trinidad, Tex.....	28	(1)	9	33.0	1
Liberty, Tex.....	25	6	6	25.0	6
Colorado (Texas):					
Columbus, Tex.....	28	2	2	28.0	2
Rio Grande:					
San Marcial, N. Mex.....	1	7	19	2.1	15
Do.....	1	21	(2)	1.7	31
Colorado:					
State Bridge, Colo.....	9	25	(2)	10.7	28
Fruita, Colo.....	12	29	29	12.3	29
Lees Ferry, Ariz.....	12	7	(2)	17.3	31
Topock, Ariz.....	14	15	18	15.0	17
Do.....	14	27	28	14.2	28
Do.....	14	31	(2)	14.3	31
Parker, Ariz.....	7	11	(2)	9.1	28-29, 31
North Fork of Gunnison:					
Paonia, Colo.....	9	8	12	9.4	10-11
Do.....	9	21	22	9.0	21-22
Do.....	9	26	28	9.0	26-28
Green:					
Elgin, Utah.....	12	27	(2)	13.0	31
PACIFIC DRAINAGE.					
Kings:					
Piedra, Calif.....	12	16	17	12.3	16
Columbia:					
Marcus, Wash.....	24	27	(2)	24.4	30-31
Vancouver, Wash.....	15	28	(2)	16.7	30
Willamette:					
Portland, Oreg.....	15	29	(2)	16.0	31

¹ Continued from April.² Continued into June.

MEAN LAKE LEVELS DURING MAY, 1923.

By UNITED STATES LAKE SURVEY.

[Detroit, Mich., June 11, 1923.]

The following data are reported in the "Notice to Mariners" of the above date:

Data.	Lakes. ¹			
	Superior.	Michigan and Huron.	Eric.	Ontario.
Mean level during May, 1923:	<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>	<i>Fect.</i>
Above mean sea level at New York.....	601.65	579.60	571.87	245.62
Above or below—				
Mean stage of April, 1923.....	+0.26	+0.42	+0.56	+0.25
Mean stage of May, 1922.....	-0.27	-0.80	-0.87	-0.93
Average stage for May, last 10 years.....	-0.49	-1.13	-0.97	-1.07
Highest recorded May stage.....	-1.40	-3.92	-2.55	-3.33
Lowest recorded May stage.....	+0.83	+0.04	+0.56	+0.66
Average relation of the May level to:				
April level.....		+0.30	+0.40	+0.30
June level.....		-0.20	-0.20	-0.20

¹ Lake St. Clair's level: In May, 574.55 feet.

EFFECT OF WEATHER ON CROPS AND FARMING OPERATIONS, MAY, 1923.

By J. B. KINCER, Meteorologist.

There was entirely too much rainfall for agricultural interests during the month in the Southern States from the Mississippi River eastward, and rain was heavy to excessive in the west-central Great Plains. It was deficient in the middle Atlantic coast area and much of the Northeast, and there was less than the normal amount

in nearly all sections west of the Rocky Mountains. Unusually heavy snow for the season fell in southern Michigan and in some adjoining sections of Indiana and Ohio, more than 10 inches being reported from some stations in Michigan. The month as a whole averaged cool for the season in the central Plains and generally so east of the Mississippi River, but elsewhere the monthly mean temperatures were near normal.

Winter wheat made fairly good progress during the month throughout the principal producing sections. The crop made some improvement in the Ohio Valley States, but continued in poor condition in some localities, especially in parts of Ohio and Indiana. Progress was satisfactory in the trans-Mississippi States, although the crop was very late and threatened with weeds in western Kansas, because of the frequent heavy rainfall following the long drought, with resultant thin stands. The month was generally favorable in the Spring Wheat Belt and that crop was reported as growing nicely in most sections, except in Iowa, where it was in only fair condition. Wheat came up to a good stand and was of good color in North Dakota and in satisfactory condition in Montana.

Oats were short and needed more moisture in Iowa, but the crop improved during the month in the Ohio Valley area, although it was too dry in parts of Illinois. Warmer weather and more sunshine were needed for corn in much of the interior of the country. Germination was slow and much replanting was necessary in Iowa and Kentucky, where planting was considerably delayed; the warmer weather near the close of the month, however, improved conditions in the eastern portion of the Corn Belt. Planting was hindered by wet soil in the central Great Plains, and there was considerable damage by heavy, washing rains on bottomlands in Oklahoma the latter part of the month.

The weather was unfavorable for cotton. Heavy and persistent rains fell in the eastern portion of the belt, where the excessive moisture and cool weather retarded germination and growth, and greatly interfered with cultivation. Much of the month was too cloudy, cool, and wet also in the northwestern portion of the belt, but conditions were more favorable in Texas, where cotton made fair to very good progress. The weather was more favorable also in the Carolinas, where field work as a rule made very good progress, but growth of cotton was rather slow because of the cool weather.

Pastures were short in the Central States east of the Mississippi River, although they showed improvement in most sections, while moisture was insufficient from the upper Mississippi Valley eastward. Ranges showed marked improvement in the Great Plains States and the central Rocky Mountain districts, where moisture was sufficient; stock did well in these areas. The range was variable, however, in the Southwest, and was mostly poor to only fair in New Mexico, with about the normal seasonal deterioration in Arizona. Ranges, pastures, and stock did well in the more northwestern States.

A cool wave overspread the Central and Northern States about the close of the first decade of the month, with freezing weather extending southward to southwest Virginia and to the Ohio River. Fruits escaped damage largely from frost although some early varieties were injured to some extent over a wide area from the upper Great Plains eastward. There was also some local frost damage in the more western States. Otherwise the month was generally favorable for fruit.